REMARKS / ARGUMENTS

The present application includes pending claims 1-23, all of which have been rejected. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 1-2, 5-8, 11-13, 18-19, and 22-23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,155,180, issued to Kim, et al. (hereinafter, Kim). Claims 3-4, 9-10, 14-17, and 20-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim, in view of U.S. Patent Application Publication No. 2004/0203472, issued to Chien (hereinafter, Chien). The Applicant respectfully traverses these rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

I. Reply to Final Office Action's Response to Arguments

The Final Office Action states the following:

> 1. Applicant's arguments filed 10/22/07 have been fully considered but they are not persuasive. In pages 9-11 of the response applicant argues that Kim does not teach "A method for measuring IQ path mismatch in transceivers, the method comprising: estimating a transmitter IQ mismatch in a form of gain and phase response for transmitter I and Q paths sharing a receiver path; and estimating a receiver IQ mismatch in a form of gain and phase response for receiver I and Q paths sharing a signal source" as recited in the Applicant's claim 1. Examiner respectfully disagrees.

> 2. Applicant relies on fig.3 of Kim to support his arguments. However, the Examiner's rejection is based on fig.9 of Kim which shows each and every element of the claimed limitations as set forth in the office action. Since applicant fails to address the rejection as regard to fig.9 of Kim, applicant's arguments are moot and this case is made final.

See Final Office Action at page 6. The Applicant respectfully disagrees and points out that Applicant's argument stated in pages 9-11 of the October 22, 2007 response is valid for both FIGS. 3 and 9 of Kim. For example, similarly to the mixer circuit of FIG. 3, the mixer circuit of FIG. 9 also comprises an up conversion unit that constitutes a transmitter and a down conversion unit (designated as RECEIVER) for estimating mismatch generated in the up conversion unit by converting an output signal from the up conversion unit to a base-band output signal. Furthermore, **the mixer circuit of FIG. 9 performs mismatch compensation by making an output signal from the transmitter be inputted to the receiver, during mismatch compensation time.** *See* Kim, col. 10, lines 36-58. **As clearly seen from Kim's FIG. 9, the transmitter portion mismatch estimation (Mismatch Estimation Tx block) receives its inputs from the receiver portion and <u>does not estimate transmitter IQ mismatch using gain and phase for the transmit I and Q paths</u>, as recited in Applicant's claim 1.** The same principal of operation applies to the mixer circuit in Kim's FIG. 3 (as already explained in the October 22, 2007 response). In addition, the transmitter I and Q paths of Kim do not share a receiver path, as recited in Applicant's claim 1.

The Applicant maintains that Kim does not anticipate claims 1-2, 5-8, 11-13, 18-19, and 22-23.

REJECTION UNDER 35 U.S.C. § 102

II. Kim Does Not Anticipate Claims 1-2, 5-8, 11-13, 18-19, and 22-23

The Applicant first turns to the rejection of claims 1-2, 5-8, 11-13, 18-19, and 22-23 under 35 U.S.C. 102(e) as being anticipated by Kim. With regard to the anticipation rejections under 102, MPEP 2131 states that "[a] claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." See Manual of Patent Examining Procedure (MPEP) at 2131 (internal citation omitted). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See id. (internal citation omitted).

Without conceding that Kim qualifies as prior art under 35 U.S.C. 102(e), the Applicant respectfully traverses this rejection as follows.

A. Rejection of Independent Claims 1, 7, 13, and 18 under 35 U.S.C. § 102(e)

With regard to the rejection of independent claim 1 under 102(e), the Applicant submits that Kim does not disclose or suggest at least the limitation of

"estimating a transmitter IQ mismatch in a form of gain and phase response for transmitter I and Q paths sharing a receiver path," as recited by the Applicant in independent claim 1.

The Examiner states the following in page 2 of the Final Office Action:

> "Kim et al teaches a method for measuring IQ path mismatch in transceivers, the method comprising: estimating a transmitter IQ mismatch in a form of gain and phase response for transmitter I and Q paths sharing a receiver path (see fig.9 element TX and col.2, lines 59-67 and col.3, lines 35-40 and col.6, lines 9-35 and col.10,lines 35-59); and estimating a receiver IQ mismatch in a form of gain and phase response for receiver I and Q paths sharing a signal source .(see fig.9 element RX and col.2, lines 59-67 and col.3, lines 35-40 and col.6, lines 9-35 and co1.10,lines 35-59)."

The Applicant points out that Kim does not teach any estimating of a transmitter IQ mismatch where the IQ signals are sampled from the transmitter IQ path. **The Examiner is referred to FIG. 9 of Kim where it is shown that transmitter Mismatch Estimation block receives its inputs from the receiver IQ output path and <u>not</u> from the transmitter IQ path.** Kim teaches down-converting an up-converted RF signal at the transmitter output, and generating IQ components from the down-converted signal for IQ phase gain mismatch compensation. *See* Kim at col. 10, lines 34-58 and FIG. 9.

The Applicant maintains that Kim does not disclose or suggest at least the limitation of "estimating a transmitter IQ mismatch in a form of gain and phase

response for transmitter I and Q paths sharing a receiver path," as recited by the Applicant in independent claim 1.

Accordingly, independent claim 1 is not anticipated by Kim and is allowable. Independent claims 7, 13, and 18 are similar in many respects to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 7, 13, and 18 are also allowable over the references cited in the Office Action at least for the reasons stated above with regard to claim 1.

B. Rejection of Dependent Claims 2, 5-6, 8, 11-12, 19, and 22-23

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 7, 13, and 18 under 35 U.S.C. § 102(e) as being anticipated by Kim has been overcome and requests that the rejection be withdrawn. Additionally, claims 2, 5-6, 8, 11-12, 19, and 22-23 depend from independent claims 1, 7, 13, and 18, respectively, and are, consequently, also respectfully submitted to be allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2, 5-6, 8, 11-12, 19, and 22-23.

REJECTION UNDER 35 U.S.C. § 103

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure ("MPEP") states the following:

> First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the teaching. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

See MPEP at § 2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination," and that "although a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be *a suggestion or motivation in the reference* to do so'" (citing In re Mills, 916 F.2d 680, 16 USPQ 2d 1430 (Fed. Cir. 1990)). Moreover, MPEP § 2143.01 also states that the level of ordinary skill in the art cannot be relied upon to provide the suggestion…," citing Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ 2d 1161 (Fed. Cir. 1999). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness.

> The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

III. The Proposed Combination of Kim and Chien Does Not Render Claims 3-4, 9-10, 14-17, and 20-21 Unpatentable

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 7, 13, and 18 under 35 U.S.C. § 102(e) as being anticipated by Kim has been overcome and requests that the rejection be withdrawn. Additionally, since the additional cited reference (Chien) does not overcome the deficiencies of Kim, claims 3-4, 9-10, 14-17, and 20-21 depend from independent claims 1, 7, 13, and 18, respectively, and are, consequently, also respectfully submitted to be allowable at least for the reasons stated above with regard to allowability of claim 1. The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 3-4, 9-10, 14-17, and 20-21.

In general, the Final Office Action makes various statements regarding claims 1-23 and the cited reference that are now moot in light of the above. Thus, the Applicant will not address such statements at the present time. However, the Applicant expressly reserves the right to challenge such statements in the future

should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim). In addition, the Applicant maintains the inherency argument stated in pages 14-16 of the October 22, 2007 response.

CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-23 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and requests that the Examiner telephone the undersigned Attorney at (312) 775-8176.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

Date: 07-MAR-2008

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